

Alternative Pumping Source: Windmill

Resource Challenge

One resource challenge in the Palouse Region is accessing the limited water sources for use by livestock without great expense or major changes to the rancher's operation, while also maintaining or improving water quality and stream bank health.

Project Summary

The Alternative Pumping Source: Windmill Demonstration is an innovative project that uses wind as an alternative pumping source for livestock water. The demonstration site is located at Maple K Farms, owned and operated by Tom and Cheryl Kammerzell.

The project was carefully planned to provide off-site water to livestock via a trough and a separate pond, while avoiding tank overflows by incorporating a demand-triggered valve system.

The system is designed to return unused water to the stream while maintaining a full trough. In addition to pumping, tank aeration by the wind-driven system eliminated the need for a stock water heater and its associated electricity expenses.

Along with District newsletter and local newspaper articles, the District hosted two well-received tours.

Project Results

Since completion, the system has performed very well. In the 2007 winter season there were only six days in which the ice on the trough needed to be broken to make water available to the herd. Besides providing a tremendous savings in time, labor and electricity, the pumping system increased water consumption by stock during the winter by approximately 50%.

The tours were very well attended, hosting approximately 35 persons including NRCS and District staff from Washington and Idaho; ranchers and operators; local newspaper staff; and Legislative Representative, Mark Schoesler.

Interest has been generated leading to requests for both District literature on the project and on-site assistance from the Professional Engineer.

State Legislative District #9
Congressional District #5



Windmill Shop Talk
at Maple K Farms.

More Information

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Key Partners Involved:

Funding:

Whitman Conservation District
WA State Conservation Commission
Implementation Grant
Maple K Farms, Tom and Cheryl Kammerzell

Participants:

Tom and Cheryl Kammerzell
Whitman Conservation District
Lance Horning, SE Area Professional Engineer
USDA Natural Resources Conservation Service

Whitman CD Board of Supervisor:

Dennis Kincaid, Chair
Tami Stubbs, Vice-Chair
Cory Aeschliman, Secretary
Walter Riley, Member
John Aeschliman, Associate
Jack Ensley, Associate
Gary Luft, Associate
Jason Monson, Associate
Jerry Peterson, Associate
John Simpson, Associate

Funding for Featured Project:

Whitman Conservation District	\$ 2,200
Private	\$ 2,500*
Total	\$ 4,700

*(some material was on-hand and not purchased)

OTHER DISTRICT INFORMATION

Background

The Whitman Conservation District was formed through the consolidation of the Central Whitman and the West Whitman Districts, and has been serving local citizens since the early 1940's. The District is located in the southwest portion of Whitman County and is a rural agricultural area which includes 424,065 acres of land. The District is bordered to the south by the Snake River and by the Palouse River on the west. There are approximately 223,159 acres of cropland, 112,800 acres of rangeland with the balance being either in the Conservation Reserve Program (CRP) or woodlands.

Mission Statement

The mission of the Whitman Conservation District is to promote the wise, ethical, and sustainable use of natural resources, by leadership in the education and assistance of all people in the District. The Whitman Conservation District will promote the implementation of the best available conservation measures and provide a forum for local input on natural resource issues.

Natural Resource Priorities and Goals

Soil Erosion: By June 2010 erosion on 75% of cropland will be below the Natural Resources Conservation Service's sustainable erosion level by the installation of conservation practices; and the soil accumulated from agriculture fields within the county road ditches will be reduced by 30%.

Water Quality & Livestock: By June 2010 water quality will be improved by maintaining, improving, or protecting 200 acres of effecting stream banks with the installation of conservation practices in upland and streamside areas; and all livestock producers will have a 'plan' in place for their livestock operations.

Alternative Cropping & Marketing: By June 2010, complete the oil seed crops agronomic, economic, marketing, production feasibility project on 300 acres with 10 producers; and complete oil seed variety trials with University of Idaho.

Air Quality: Continue to be a burn permit authority, assisting stakeholders with the permitting process through June 2010.

Wildlife: Assist 2 customers each year with wildlife habitat development and/or concerns.

Weed Control: By June 2010 work with land managers and Farm Service Agency County Committee to reduce weeds on CRP ground and range ground.

Information - Education Priorities and Goals

The District will continue to promote current programs, and expand, as funding and staffing levels allow, to create a strong information and education program reaching 600 people, both adults and youth, by June 2010.

Critical Geographic Areas

The western part of the District is channeled scablands consisting of broad basalt plateaus. The north half drains into the Palouse River and its tributaries of Union Flat, Rebel Flat, and Willow Creeks. The south half of the District consists of a narrow band of very steep land along the Snake River Canyon that includes tributaries of Alkali Flat, Almota, and Penawawa Creeks.

Agriculturally, Whitman Conservation District is divided into two major areas: eastern and western, with a precipitation range from 12" – 22". The eastern area has deep soils that are used for dryland crops. The western area also consists of some deep soils but also shallow, channeled scablands that are used for large grain-livestock operations; for both areas erosion control is the major conservation problem. The balance of the land has been enrolled in CRP which presents several challenges to the local communities.

Natural Resources Information: More Work to Do

Soil Erosion: Continued and increased funding needed to provide technical assistance and cost-share on 282,000 acres of cropland for the installation of conservation practices and use of conservation tillage.

Water Quality & Livestock: Continued and increased funding needed to provide technical assistance and cost-share for the implementation of best management practices for stream bank protection or improvement on 11 streams; and to assist livestock operators with requirements affecting their operations with regard to water quality.

Alternative Cropping: Additional funding needed to provide technical assistance and cost-share for producers exploring or adding an alternative crop to rotation for agronomic benefits.

Air Quality: Continued and increased funding needed to provide technical assistance and cost-share for best management practices to assist in the reduction of air pollution through farming practices.

Education: Specific funding needed to provide much needed educational outreach in both adult and youth programs.

